

Does comprehension of gesture have the same positive relation to child vocabulary as production of gesture?

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Young children gesture in order to communicate before producing spoken words (Bates, 1976). They produce different gesture types—*deictic gestures* to indicate objects (e.g., point at chair), *conventional gestures* to convey culturally prescribed meanings (e.g., thumbs-up), and *iconic gestures* to convey actions or attributes associated with objects (e.g., flapping arms to convey bird). Importantly, the content and size of children's early production of gesture, particularly deictic gestures, relate to the size of their later vocabularies in speech (Özçalışkan, Adamson, & Dimitrova, 2014). In this study we ask whether children's comprehension of gesture has a similar positive relation to their later vocabulary in speech. To explore this question, we tested 20 toddlers (Mage=47months) using a gesture comprehension task. Children were presented with 36 gesture-speech combinations with neutral speech, including 12 iconic, 12 deictic and 12 conventional gestures and asked to choose (out of a choice of two objects) the object that best matches the experimenter's description. Upon completion of the gesture comprehension task, children were administered two standardized vocabulary tests, one testing receptive (Peabody Picture Vocabulary Test; Dunn & Dunn, 1997) and the other testing expressive vocabulary size (Expressive Vocabulary Test; Williams, 1997). We found that children's comprehension of two gesture types—namely deictics and iconics was related to their receptive (deictics: $r=.44$, $p=.06$; iconics: $r=.57$, $p=.01$) and expressive (deictics: $r=.61$, $p=.01$; iconics: $r=.51$, $p=.03$) vocabulary size. No such relation was found for conventional gestures and vocabulary. Our findings further extend previous findings on gesture production to gesture comprehension by showing a close association between comprehension of deictic and iconic gestures and speech vocabulary.